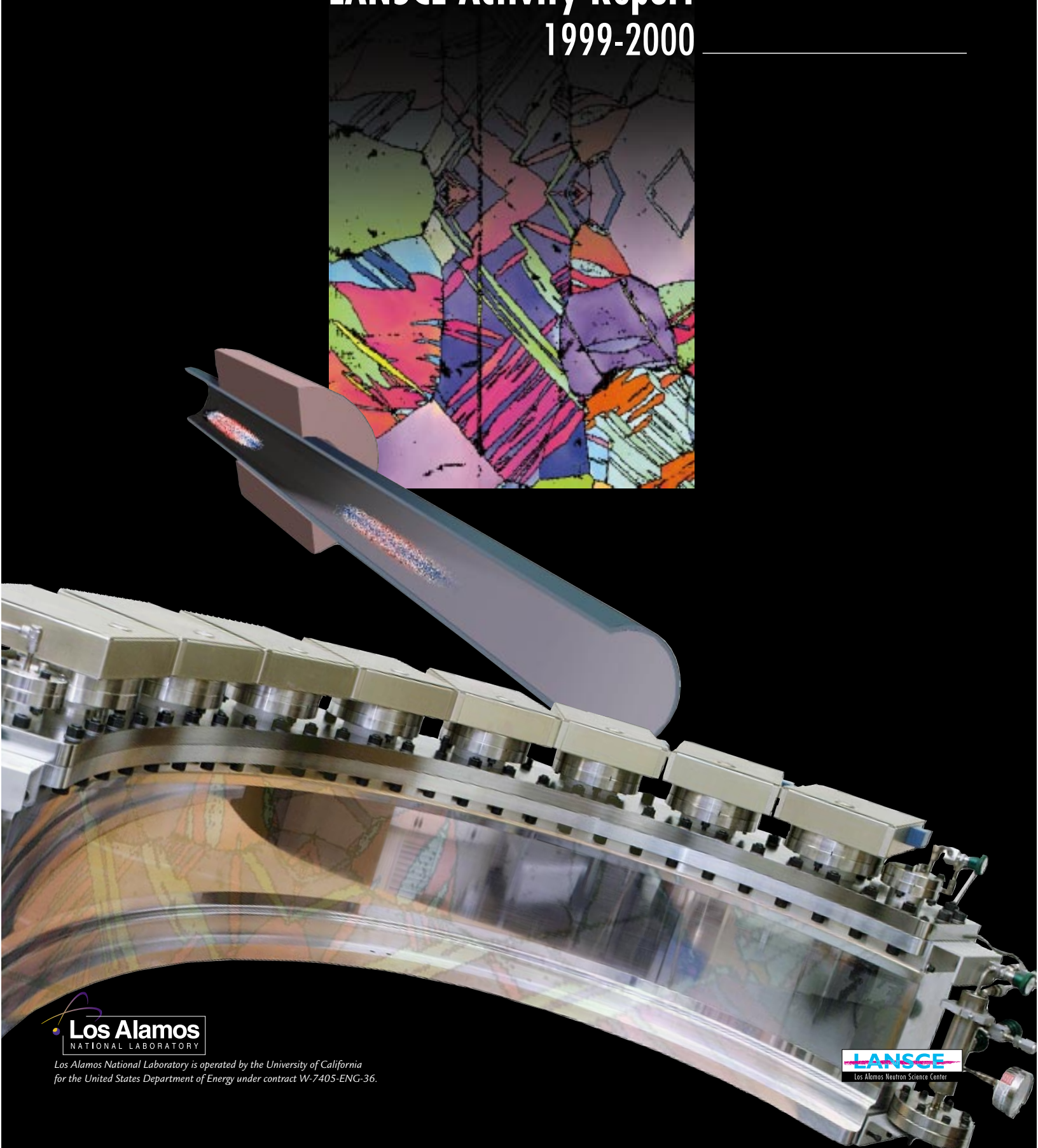


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Progress Report

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LANSCe Activity Report 1999-2000



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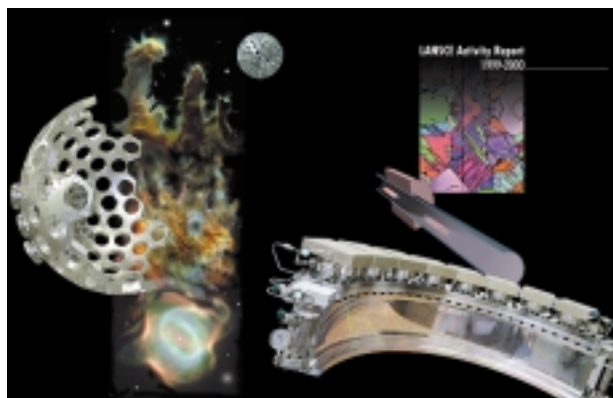
Rick de Saussure

Printing Coordination: IM-4 Imaging Services

This is the second report in this series.

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↑ About the cover: The cover displays a variety of images that portray some of the research and technology under way at LANSCE. The bottom image is a novel detector built by the Instrument Division of Brookhaven National Laboratory for the Protein Crystallography Station constructed at the Lujan Center. This new instrument incorporates a number of technological innovations that will allow the structural biology community to collect time-of-flight wavelength-resolved Laue data from small protein crystals and partially disordered systems, including fibers and membranes. At the top is an image of the microstructure of zirconium taken on the Neutron Powder Diffractometer at the Lujan Center to examine the effects of twinning in deformed polycrystalline material. At the center is an image of a three-dimensional particle-beam simulation of a beam-halo experiment on the Low-Energy Demonstration Accelerator. The back cover displays the new support sphere for the Detector for Advanced Neutron Capture Experiments, which will allow scientists to study neutron-induced transmutation of radioactive elements to better understand the synthesis of chemical elements in stars (background image), processes involved in the burnup of nuclear waste, and archived data from past underground nuclear tests.

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LANSCE Activity Report 1999–2000

*Solving National Problems
Using High-Intensity Accelerators
and Spallation Neutron Sources*

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LANSCE Activity Report 1999–2000

*Solving National Problems
Using High-Intensity Accelerators
and Spallation Neutron Sources*

Abstract

The Los Alamos Neutron Science Center Activity Report describes scientific and technological progress and achievements in LANSCE Division during the period of 1999 to 2000. This report includes a message from the Division Director, an overview of LANSCE, sponsor overviews, research highlights, advanced projects and facility upgrades achievements, experimental and user program accomplishments, news and events, and a list of publications. The research highlights cover the areas of condensed-matter science and engineering, accelerator science, nuclear science, and radiography. This report also contains a compact disk that includes an overview, the Activity Report itself, and experiment reports from LANSCE users, as well as a search capability.